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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,970	10/20/2004	Hermann Gaessler	10191/3718	1953
26646	7590	01/27/2006	EXAMINER	
KENYON & KENYON LLP ONE BROADWAY NEW YORK, NY 10004				NGUYEN, HOAI AN D
		ART UNIT		PAPER NUMBER
		2858		

DATE MAILED: 01/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/511,970	GAESSLER ET AL. <i>(C)</i>
	Examiner Hoai-An D. Nguyen	Art Unit 2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 08 December 2005.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 17-34 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) 20 and 21 is/are allowed.
 6) Claim(s) 17-19 and 22-34 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 08 December 2005 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1.) Certified copies of the priority documents have been received.
 2.) Certified copies of the priority documents have been received in Application No. _____.
 3.) Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Receipt is acknowledged of the Amendment filed on December 8, 2005. Claims 17-34 are pending in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 17, 19, 22-26 and 28-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doman (US 6,227,062).

Doman teaches a transmission system electrical connector monitoring system comprising:

With regard to claims 17, 24-26 and 32-34, monitoring at least two electromagnetic valves/(electric consumers) (FIG. 1, solenoid-controlled valves 24 and 30) of an internal combustion engine (Column 2, lines 17-42), in which an actual current sent to each (draw or voltage drop across) of the at least two valves is independent of other ones of the at least two valves and in which a setpoint current (expected draw or expected voltage drop across) for each of the at least two valves is preselected, the method comprising: determining a total actual current (FIG. 3, the fifth box from top down: measured actual voltage drop across the power supply) that is supplied to the at least two valves, adding the setpoint currents to form a total

setpoint current (FIG. 3, the fourth box from top down: expected sum or reference value), comparing (FIG. 3, the sixth box from top down) the total setpoint current (FIG. 3, the fourth box from top down: expected sum or reference value) to the total actual current (FIG. 3, the fifth box from top down: measured actual voltage drop across the power supply) and providing a comparison result (FIG. 3, the sixth box from top down), and monitoring at least one of an interconnection of the at least two valves and the at least two valves based on the comparison result (Abstract, column 1, lines 53-62 and FIG. 3).

However, the only difference between Doman and the invention is that Doman is measuring the voltage drop across a valve/(electric consumer) instead of the current flowing into the valve as recited in the claims. It is obvious to one having ordinary skill in the art to recognize a well-known relationship between current and voltage, Ohm's law, if the excitation is current, the response is then voltage, and vice versa. If the time-varying electrical excitation comprises either voltage excitation or current excitation, then time-varying electrical response comprises either current response or voltage response, respectively; that is, current and voltage drop across are two interchangeably electrical parameters.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the transmission system electrical connector monitoring system of Doman to incorporate the teaching of using current instead of voltage drop across (emphasis added) in the measuring, determining, adding and comparing steps since such an arrangement is beneficial to provide an alternative method for measuring and analyzing electrical systems. This various modification and alteration is made without departing from the spirit and scope of Doman device.

With regard to claims 19 and 28, Doman also discloses that the actual currents (draw or voltage drop across) supplied to the at least two valves are measured by a single measuring device (FIG. 2, voltage meter 46) and are used as the total actual current (From column 2, line 64 to column 3, line 2).

With regard to claim 22, Doman discloses that a fault in one of the at least two valves is deduced from a difference between the total setpoint current and the total actual current (Column 3, lines 3-34 and FIG. 3).

With regard to claim 23, Doman discloses that in chronologically successive measurements and comparisons, a faulty valve of the at least two valves is deduced from an instant when the difference occurs (Column 3, lines 3-34 and FIG. 3).

With regard to claim 29, d.c. converters (FIG. 1, electric motors 36 and 38) generate the actual currents supplied to the at least two valves.

With regard to claim 30, an output stage (FIG. 2, controller 50) controls (for controlling) the actual currents supplied to the at least two valves (selectively energized and de-energized electrical devices 24, 30, 36, 38) (Column 4, lines 15-42).

With regard to claim 31, the output stage includes switches (not shown), which are switchable (selectively energized and de-energized electrical devices 24, 30, 36, 38) by the control arrangement (Column 4, lines 15-42).

4. Claims 18 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doman in view of a court decision about duplication of parts according to MPEP § 2144.07 REVERSAL, DUPLICATION, OR REAR-RANGEMENT OF PARTS, section VI. B.

Art Unit: 2858

Doman teaches all that is claimed as discussed in the above rejection of claims 17, 19, 22-26 and 28-34, but he does not specifically teach that the actual currents supplied to the at least two valves are measured by at least two measuring devices and are added to form the total actual current.

However, Doman does disclose a voltage meter 46, which provides a signal 48 indicative of total voltage drop across the first and second valves 24 and 30.

Moreover, it is clear that claims 18 and 27 using two measuring devices are simply a duplication of parts. The features upon which applicant relies (i.e., measured by at least two measuring devices) is not sufficient by itself to patentably distinguish over Doman. In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) (Claims at issue were directed to a water-tight masonry structure wherein a water seal of flexible material fills the joints which form between adjacent pours of concrete. The claimed water seal has a "web" which lies ** in the joint, and a plurality of "ribs" ** >projecting outwardly from each side of the web into one of the adjacent concrete slabs. <The prior art disclosed a flexible water stop for preventing passage of water between masses of concrete in the shape of a plus sign (+). Although the reference did not disclose a plurality of ribs, the court held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced.).

Allowable Subject Matter

5. Claims 20 and 21 are allowed.

The following is an examiner's statement of reasons for allowance:

- The primary reason for the indication of the allowability of claim 20 is the inclusion therein, in combination as currently claimed, of the limitation of a holding current, via which a corresponding one of the at least two valves is held in an end position in a stable manner, used as the actual current. This limitation is found in claim 20 is neither disclosed nor taught by the prior art of record, alone or in combination.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

6. Applicant's arguments filed December 8, 2005 have been fully considered but they are not persuasive.

In response to Applicant's argument in the first paragraph on page 9, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning from second paragraph on page 9 to second paragraph on page 10, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only

knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). To this extend, as discussed in the above rejection of claims 17, 19, 22-26 and 28-34, the only difference between Doman and the invention is that Doman is dealing with measuring the voltage drop across a valve/(electric consumer) and the invention is dealing with measuring the current flowing into the valve as recited in the claims. It is obvious to one having ordinary skill in the art to recognize that current flowing into and voltage drop across an electrical device are two interchangeably electrical parameters. By replacing "total actual current" with "actual voltage drop across the power source", "setpoint currents" with "expected voltage drops across" and "total setpoint current" with "sum of expected voltage drops across", Doman discloses each and every single steps as recited in independent claims 17, 24-26, 32 and 33: determining a total actual current (FIG. 3, the fifth box from top down: sense actual voltage drop across the power source caused by energizing required combination of electrical devices), adding the setpoint currents to form a total setpoint current (FIG. 3, the fourth box from top down: determine REF = sum of expected voltage drops across for all energized electrical devices), comparing the total setpoint current to the total actual current (FIG. 3, the sixth box from top down: actual voltage drop > REF?) and providing a comparison result (FIG. 3, the sixth box from top down: the Yes or No branches), and monitoring at least one of an interconnection of the at least two valves and the at least two valves based on the comparison result (FIG. 3, determine connector fault does or does not exist) (Abstract, column 1, lines 53-62 and FIG. 3).

Claims 18, 19, 22, 23 and 27-31 have been traversed as discussed above.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoai-An D. Nguyen whose telephone number is 571-272-2170. The examiner can normally be reached on M-F (8:00 - 5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on 571-272-2399. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hoai-An D. Nguyen
Examiner
Art Unit 2858
HADN

Hoai-An D. Nguyen

ANJAN DEB
PRIMARY EXAMINER